

Claims

[c1]

What is claimed is:

1. An object-oriented controller in which abstraction is accomplished by the inclusion of interfaces between the hardware, software and network elements, the controller comprising: a. Hardware with a processing means using an operative system that runs an application, said application made of a plurality of micro-objects from a micro-object library, a memory means, an Input/Output means and a communication means; b. a Monitoring Graphics User Interface interfacing to a plurality of hardware through said hardware's application; and c. a network adapter that receives from and sends data to a plurality of hardware through said hardware's communication means. 2. The controller of claim 1 wherein the communication from the hardware to the network adapter consists of a send and receive function.

[c2]

3. The controller of claim 1 wherein the communication from the hardware to the network adapter consists of a send and receive function with a logical ID being assigned to each hardware and the send function using four parameters;
Service, whether an acknowledgement is needed;
Destination hardware;
Source hardware; and
Length, which is the length of the data packet to be communicated.

[c3]

4. The controller of claim 1 wherein the Monitoring Graphics User Interface is used to download the application to the hardware.

[c4]

5. The controller of claim 1 wherein the Monitoring Graphics User Interface is contained on a computing means.

[c5]

6. The controller of claim 1 wherein the Monitoring Graphics User Interface is contained on a computing means and interfaces to a plurality of hardware through the Network Adapter.

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- [c6] 7 The controller of claim 1 wherein the Network Adapter contains a mapping means to map a Destination address with the corresponding logic and hardware address.
- [c7] 8. The controller of claim 1 wherein the micro-object library is created with a plurality of micro-objects each with each own methods and capabilities.
- [c8] 9. The controller of claim 1 wherein when changing hardware, a new set of micro-objects for the new hardware will be used that will contain methods and data structure analogue to the old set of micro-objects used by the old hardware.
- [c9] 10. A method for an object-oriented controller comprising the step of : a. Using a Hardware means with with a processing means using an operative system that runs an application, said application made of a plurality of micro-objects from a micro-object library, a memory means, an Input/Output means and a communication means; b. Using a Monitoring Graphics User Interface for interfacing to a plurality of hardware through said hardware's application; and c. Using a network adapter that receives from and sends data to a plurality of hardware through said hardware's communication means. 12. The method of claim 10 wherein the communication from the hardware to the network adapter consists of a send and receive function.
- [c10] (✓) 13. The method of claim 10 wherein the communication from the hardware to the network adapter consists of a send and receive function with a logical ID being assigned to each hardware and the send function using four parameters;
Service, whether an acknowledgement is needed;
Destination hardware;
Source hardware; and
Length, which is the length of the data packet to be communicated.
- [c11] (✓) 14. The method of claim 10 whichi includes using the Monitoring Graphics User Interface to download the application to the hardware

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15. The method of claim 10 which includes containing the Monitoring Graphics User Interface on a computing means.
- [c12] 16. The method of claim 10 includes containing the Monitoring Graphics User Interface on a computing means and interfacing to a plurality of hardware through the Network Adapter.
- [c13] 17 The method of claim 10 which includes having the Network Adapter contain a mapping means to map a Destination address with the corresponding logic and hardware address.
- [c14] 18. The method of claim 10 which includes creating the micro-object library with a plurality of micro-objects each with each own methods and capabilities.
- [c15] 19. The method of claim 10 wherein when changing hardware, a new set of micro-objects for the new hardware will be used that will contain methods and data structure analogue to the old set of micro-objects used by the old hardware.

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